

Book review

Load dependent increasing contraction of 'Unit Space Matrix' (Space-Time-Energy), according to proposed column geometry which successively involves all four dimensions of space-time, generates field of all four basic forces and leads to quantum gravitation.

Dr Ashok Saxena, Dr Surekha Saxena

Abstract:

Kurt Gödel proved in his 'Incompleteness theorem', that there are problems which can not be solved by any mathematical procedures. With such a paradox of existing pure mathematical string models, a new approach of 'model dependent realism' is adopted to carve 'Super symmetrical geometrical string model' of structure and working of universe.

The proposed mathematically consistent, Logistic 'Treo model' investigates 'basic of all basics of the universe', beyond the domain of mathematics, to find out '*where do the laws of nature come from*'.

With the Introduction of Energy conventional, four dimensional space-time is converted in omnipresent Ten Dimensional Space Matrix (Space -Time-Energy).

Since Newton written equations of gravitational field, we are only searching the equations of all force fields, without exploring how these basic four fields are formed.

Without photon 'EM forces', without nucleons 'binding strong nuclear forces' and without alpha, beta and gamma particles 'weak

forces' can not erupt and at least a body is required for eruption of gravitational force.

Mere presence of all these, exert a load (of mass or momentum) on space matrix which is neutralized by four generation of kinetic column (four bosons), which all together unite to form field of respective force.

Load (ACTION) dependent, layer by layer increasing contraction of unit Space- matrix (Space-Time-Energy) according to proposed column geometry ($2n-1$ units are in any n^{th} layer and n^2 units in any n layered kinetic column), successively involves all four dimensions of space-time of one unit space, to concentrate and direct energy 'for equal and opposite REACTION'.

Thus with this changing geometry the solo force in nature, changes its magnitude and also type of force erupted, and thus generates fields of all four basic forces, and thus 'Unites All Four Forces' and leads us to Quantum Gravitation.

The dispersing load at centre of cosmic body is first supported by four dimensional kinetic column which forms gravitational sphere around its gravitational centre.

This central load then disperses and neutralized by 'three dimensional spherical deformation', in which parent cosmic body is accommodated.

Still distally in two dimensional elliptical deformations at various gravitational field quantum levels, according to gravitational kinetic energy levels in its orbits all baby bodies are placed.

The one dimensional uniform deformation, which obeys Newton's gravitational field equations, continues up to periphery of gravitational field.

This complete description of Gravitation, as per proposed Treo model explains the mechanism of 'formation of gravitational fields', 'formation of all Elements', 'positioning of planets' and reason behind formation of 'RING OF SATURN and ASTEROID BELTS'.

mail2ashoksaxena@gmail.com,

SALIENT FEATURES OF TREO MODEL

Universe is created by Strings or Treos, each of Planck's least length, which manifest only in one dimension i.e. length.

As 'free treos' they accumulate in unit of 'one quanta EM energy' to form all photon packet of EM spectrum; while increasing in unit of 'one unit electron', they form all matter.

As "bound treos" they get alternately arranged with voids to construct our Space (space matrix). ^[13a]

BOUND TREOS:

Bound treos are precursor of five positive dimensions, while voids represent 'slowly un-Curling five curled up negative dimensions', and together being alternately arranged, they construct the fabrics of our omnipresent ten dimensional space or Space matrix (Space-Time-Energy).^{[10a][2]} This matrix represent, it's all three inter-dependent components of Space, Time & Energy, where energy is proposed as positive Fifth dimension of universe for the first time in this model. ^{[10b][7]}

SPACE ENERGY or POTENTIAL ENERGY.

All Bound treos of space matrix are vibrating simultaneously at Planck frequency, or S times ($1.85485844 \times 10^{43}$) per second, in S number of different directions, in a circle of 360 degrees in any one plane, ^[13b] and thus it generates ground energy or potential energy of space matrix.

KINETIC ENERGY:

When any load of 'free treos' is exerted at a point (on one bound treo) on space matrix, equal number of bound treos of this space

matrix start vibrating only in direction of load (now called kinetons) and get arranged according to proposed column geometry ($2n-1$ units in any n^{th} layer and n^2 units in any n layered one kinetic column), to form reacting kinetic column ^[13c]. This conversion of bound treos into kinetons results in contraction/deformation of local space matrix.

COSMIC CODE:

This S number i.e. $1.85485844 \times 10^{43}$ is being proposed as ‘new dimensionless universal constant’ which decides the value of all other universal constant; it is ‘cosmic code’ as it regulates working of our universe.

‘S number’ decides the value of Reduced Planck constant, Planck constant, Gravitational constant, Cosmological constant, Hubble constant, Speed of Light, EM energy in Unit photon, Mass energy in Unit Electron, Planck mass or Unit mass, Kinetic energy of one Graviton and mass in one Unit black hole, etc. etc. ^[13d]

S number of vibrations per second, of simultaneously vibrating every bound treo in space matrix is ‘cosmic rhythm’, and thus it quantities our ‘Quantum Pendulum universe’.

This rhythm of vibrations quantities and decides; unit space (one cubical ‘unit space matrix’ with S bound treos in each side), unit time (S vibrations in one second), unit energy (one quanta energy or S treos), unit action (load of S free treos), unit reaction (S number of supporting kinetons), universal speed (S bound treo distance per second; speed of light) and also marks \sqrt{S} number of quantum levels in each dimension; thus S number carves and regulates our universe.

UNIT SPACE MATRIX:

S number of Bound treos (each of Planck’s length) get arranged in a line to construct one row in first dimension of length, on one side of cubical ‘unit space matrix’. While S such rows are arranged side by side in breadth to construct one sheet in its two dimensions of

length and breadth. S such sheets placed one over other form three dimensional cubical ‘unit space matrix’.

S number of bound treos in a line forms one row (simile; one line of page), S^2 bound treos are in one sheath (one page of a book) and total S^3 bound treos are present in one multilayered unit space matrix (S pages of a book). ^[13e]

Unit space matrix is not a physical division of space, but it is one functional unit, which can be counted from any point, where the load is exerted and supported.

This unit space matrix gets first involved to execute any Action–reaction mechanism. Any load (mass or momentum) of free treos exerted at a point, is neutralized by equal number of kinetons arranged according to proposed column geometry to form one reacting kinetic column at this apex bound treo.

With increasing load, the deformation increases layer by layer and the reacting kinetic columns, successively involves all four dimensions of space-time of unit space matrix, to generate fields of all four basic forces.

UNIT TIME:

Each vibration occur, after a time gap of Planck least time, which is also ‘least processing time’, or minimum time required to execute any action in universe and thus each bound treo vibrates S times, in unit time of one Second.

In this time gap of each least time, the whole universe readjusts and universally expands a bit at each point by simultaneous slow uncurling of all curled up voids. Along with this universal expansion, at some points in response of exerted load the space matrix also contract locally and form reacting kinetic columns, and thus our universe is constantly changing, which is perceived as ‘flow of time’.

If in any area ‘this rate of change’ slows down, by *reduction in number of vibrations per second* of all involved local bound treos,

the time will also slow down in this local area, where every process will now take more time. This is ‘slow down of time’.

QUANTUM OF UNIT ACTION AND UNIT ENERGY:

S number of treos is quantum of energy, which is unit energy and is the calculated value of Reduced Planck constant. While the unit angular momentum of this unit energy (also unit action), calculates the value of Planck constant. ^{[11a][13f]}

DEFORMATION OF SPACE:

In this quantum universe, each dimension of Space-time has \sqrt{S} quantum levels. The energy does not increase linearly but it jumps in steps at each next quantum level, in each of all four dimensions of Space- Time.

The unit of increment of energy, (which increases at each next quantum level), in all four dimensions are; S free treos or one quantum EM energy (of unit photon) in first dimension, \sqrt{S} quanta mass energy (of unit Electron) in second dimension, S quanta energy (of Unit Mass) in third and $\sqrt{S} \times S$ quanta energy in fourth dimension, respectively.

FORMATION OF ALL PHOTONS & MATTER:

EM energy in units of one quantum ‘present in one unit photon’ increases at each of \sqrt{S} quantum levels in first dimensional deformation of length, to form all \sqrt{S} types of photon packets, which comprises complete EM spectrum.^[4]

To support even bigger packets, now second dimension of breadth also gets involved and maximum load of first dimension now becomes minimum load of second dimension.

While in two dimensional deformation in length and breadth of unit space matrix, increasing mass energy in units of \sqrt{S} quanta ($\sqrt{S} \times S$ free treos) present in ‘one unit electron’ increases at each of \sqrt{S} ‘quantum levels’, to form all matter packets of energetic electrons, all elementary particles, quarks, leptons, hadrons, all elements, W

Z bosons of weak forces, and molecules. At last \sqrt{S} 'quantum level', in second dimension it thus finally accumulates $S \times S$ treos; which is unit mass or Planck mass i.e. 2.176434×10^{-8} kg.

LENGTH OF SPREAD OF ALL PACKETS:

These 'increasing quanta energy packets' while in 'wave form', gradually contract on reducing wave length, in first and second dimension as they spread on their 'Reduced Compton wave length', which is equal to 'S number of bound treos/ number of quanta mass energy in packet', according to this proposed formula.

[13g]

INCREASING MASS AND ITS EXERTED LOAD:

With increasing mass and reducing length of spread of packet, the packet density increases and exerts increasing uniform load on each apex bound treos along its RC wave length.

Thus, the exerted load of packet on each apex bound treos along its RC wave length is square of this quantum level number 'in terms of free treos' in first dimension and square of this quantum level number 'in terms of mass energy quanta' in second dimension. While in third and fourth dimension the exerted load at its single gravitational centre (at apex bound treos of solitary kinetic column of this dimension) is always 'square of total number of unit masses in body'.

FORMATION OF REACTING KINETIC COLOUMNS:

This exerted load in each dimension is supported by the respective Kinetic column of this dimension, which get arranged according to proposed column geometry (as $2n-1$ units are added in every n^{th} layer formed at n^{th} quantum level and thus total n^2 units are always present in any n layered kinetic column).^[17]

These units are; one kinton (one deformed bound treos), one orbitum (S kintons or one row), one graviton (S^2 kintons or one sheath) and one electron black hole (all S^3 kintons of one 'unit space matrix'), respectively in four dimensions.

In response to increased load at each next quantum level, one new layer is added, having $2n-1$ kinetons in first dimension and $2n-1$ orbitums in second dimension, in all 'sub kinetic columns' present at each apex bound tree along its RC wave length.

Thus at last \sqrt{S}^{th} quantum level biggest one full 'kinetic column' is completed in first dimension of length and will have total S kinetons. Similarly in two dimensional deformations in length and breadth in second dimension the biggest full 'graviton column' formed at \sqrt{S}^{th} quantum level will have total S^2 kinetons.

ANY PACKET REQUIRES MINIMUM ONE UNIT TIME (S vibrations in one second) FOR ITS CONTINUOUS FULL SUPPORT:

Thus we observe that each one quantum load, on unit space matrix is continuously supported, by one quantum kinetic energy (or S kinetons) present in one EM wave, by its S vibrations only in one unit time of one second in first dimension and also by one orbitum (S kinetons) by its one full rotation in one second, in second dimension.

While one unit mass of S quanta mass energy (total $S \times S$ trees) is supported for per one unit time of one second (i.e. continuously); by S number of vibrations of S number of orbitums (total $S \times S$ kinetons) present in 'one full graviton column' of second dimensional deformation, which is formed at 'unit gravitational centre' of this unit mass, by one graviton (by S vibrations of S^2 kinetons in one second).

SPEED OF LIGHT:

Photon packet travels in a line by translational motion and shifts to next adjacent bound tree with each vibration and thus it moves by a distance of S bound trees length, in S vibrations in one second. This S bound trees distance when calculated in Km is 2.99792458×10^8 meter per second, is the known speed of light, and confirmation of our all postulates.

UNIFICATION OF FORCES:

The joint deformation of all kinetic columns together generates the field associated with any dimension. All four basic forces are different manifestations of only one solo force of universe, which erupts/ generates by this described action – reaction mechanism.

Thus, locally deformed space matrix geometry, changes by successive inclusion of increasing number of dimensions of space-time (one by one), which also changes the nature and magnitude of basic force erupted (EM force, Atomic force, Weak forces and gravitational force). ^[13h]

UNIT MASS:

One unit mass, or S^2 free treos (or S quantum mass energy: $3.442488398 \times 10^{86}$ free treos) is maximum load in universe exerted at one point (one apex bound treo or its one unit gravitational centre) and is supported by one graviton column of one graviton. ^[13i]

GRAVITON:

Each graviton supports one unit mass, by its total kinetic energy of one graviton column i.e. '*Planck energy*'. Energy of all such gravitons arranged on each apex bound treo along one meter length calculates the known value of '*Planck force*', and the energy of all such gravitons present in one meter cube calculates the known value of '*Planck's energy density*'. ^[13j]

ELECTRON BLACK HOLE:

The unit of increment is one unit mass which increases at each next quantum level in third dimension and any multiple unit mass body will exert a load of 'square number of its unit masses', at its gravitational centre, which is supported by 'square number of gravitons' arranged in the kinetic column of third dimension, proposed as 'electron black hole'.

Thus load increases by $2n-1$ unit masses at each next n^{th} quantum level, which is supported with the addition of one new spiral layer having $2n-1$ gravitons, and thus finally \sqrt{S} spiral layers are added up to \sqrt{S} quantum levels, which will have total S gravitons in one full ‘electron black hole’ (the full kinetic column of third dimension) and it will support S unit masses load of \sqrt{S} unit masses body (which is equal to 20 billion metric ton). All bodies in three dimensional deformations will constantly rotate while supported by its rotating kinetic column.

GRAVITATIONAL OR SCHWARTZ CHILD SPHERE:

Finally still increasing size of cosmic body (by addition of \sqrt{S} unit masses as one unit at each next quantum level) with its exerted load at its gravitational centre, of ‘square number of unit masses in this body’, is supported by increasing deformation of four dimensions of Space- time around its one gravitational centre, by formation of one gravitational sphere or one kinetic column of four dimensional deformation.

In the formation of this kinetic column, the load of ‘increasing mass at each next n^{th} quantum level’, is supported by addition of $2n-1$ electron black holes (formed by complete deformation of $2n-1$ ‘unit space matrices’) present in newly added ‘one new electron black hole row’ (which thus also adds \sqrt{S} number of bound tree layers in its radius) in this one kinetic column of fourth dimension; which while rotating forms one gravitational sphere or Schwartz child sphere of this cosmic body. Thus formed rotating layers of four dimensional kinetic column up to last \sqrt{S} quantum level, will have total S number of bound tree layers in radius of this gravitational sphere.

It will support the exerted load of S^2 unit masses, at its solitary gravitational centre of S unit masses body (or one unit black hole), by total S^2 gravitons (present in S number of electron black holes), in this rotating full kinetic column of fourth dimension

(which is its gravitational sphere of ‘one unit black hole’ having S number of bound tree layers in its radius).

Any smaller M unit masses cosmic body (e.g. Sun) exerts a load of M^2 unit masses, which is supported by M^2 gravitons (arranged according to described column geometry) in its M layered gravitational sphere formed around its gravitational centre.

FORMATION OF GRAVITATIONAL FIELD

(e.g. of any M unit masses body):

M numbers of full graviton columns unite side by side to form gravitational field (column) of this M unit mass cosmic body. ^[13k]

‘ M^2 unit masses load’ of this ‘ M unit masses cosmic body’ at its unit gravitational centre, after first being supported by its gravitational sphere, further disperses on surrounding space matrix as $2M$ unit masses load, at each ‘gravitational field quantum level’ on every orbit, which in turn is supported by ‘matter wave of this orbit’.

GRAVITATIONAL FIELD QUANTUM LEVELS:

The distance (radius) of specific orbit at any ‘gravitational field quantum level’ (out of total \sqrt{S} gravitational field quantum levels in any gravitational field) from gravitational centre of cosmic body, can be calculated in terms of number of bound tree layers; by multiplying “square of this quantum level number with number of unit masses (or number of layers in its gravitational sphere) in cosmic body”. ^[13L]

ACTION REACTION MECHANISM IN GRAVITATIONAL FIELD:

At n^{th} bound tree layer from its gravitational centre (at any quantum level in one orbit), the M unit masses in this M unit mass

cosmic body are supported at its Reduced Compton wave length by n number of kinetic columns.

While $2M$ unit masses total exerted load (of this M unit masses body) on this orbit at n bound tree distance from its gravitational centre, will be supported by $2n$ kinetic columns, present on $2n$ apex bound trees, which form 'matter wave of this orbit' (but one full layer of 'kinetic column' at this quantum level can have only $2n-1$ kinetic columns).

This $2M$ exerted load of body on any orbit, gets divided equally on all apex bound tree in matter wave and on any one apex bound tree of wave, it is equal to $r \times a$ (an Action in terms of number of free trees), which is supported by v^2 kinetons (in a reaction generated by equal number of kinetons), which are present in one v layered kinetic column. (These values can also be calculated by Newton's equation $MG = r^2 a$ and $MG = rv^2$: where MG in terms of free trees = M unit masses).

These all observations were further verified in solar system in orbits of all baby bodies of four outer planets and in orbits of 7 earth like baby bodies of star TRAPPIST 1, outside our solar system.^{[12] [18]}

WHAT GIVES SLOPE TO GRAVITATIONAL FIELD: WILL SOLITARY BODY GRAVITATE?

The gravitational field of any body is formed by union of number of 'graviton columns' which are equal to the 'number of unit masses which constitutes this body'.

Thus M numbers of graviton columns unite side by side to form gravitational field (column) of any ' M unit masses cosmic body'.

In gravitational field of sun, the circumference of any orbit (at any gravitational quantum level), is formed by union of Compton wave lengths of all M number of matter waves at one 'identical

quantum level' in all M 'graviton columns', which forms in two dimensional deformation of quantum world.

Any cosmic body of M unit masses, exerts a load of M^2 unit masses at its gravitational centre, and is supported by four dimensional kinetic column having M^2 gravitons, which forms M layered gravitational sphere around its gravitational centre.

This ' M^2 unit masses load' (of any M unit mass body at its gravitational centre) further disperses on surrounding space matrix as $2M$ unit masses load on each orbit. This $2M$ load on any orbit is supported by all kinetic columns forming 'one consolidated matter wave of this orbit' (which in turn is formed by union of M number of small matter waves at identical quantum level in M graviton columns of quantum world).

In the orbit which is situated at 'n bound two layers distance' from centre of body, the M unit masses of any cosmic body can be supported by total kinetic energy of 'n' number of kinetic columns, which are present along the 'Reduced Compton wave length' of this matter wave.

But to support $2M$ unit masses load ('total exerted load of cosmic body' on this particular orbit which is situated in this n^{th} layer) the action - reaction mechanism, will generate required kinetic energy from all ' $2n$ ' kinetic columns of matter wave formed in this orbit.

While this n^{th} layer of gravitational column (field) is formed by only $2n-1$ kinetic columns, and thus the kinetic energy generated by this one extra kinetic column in matter wave (which could not be used by gravitational kinetic column to support the body), will go to thermodynamic sink (and it will disperse on space matrix)*.

*The same principle regulates the work efficiency of an engine in thermodynamics.

In proposed coloumn geometry (with $2n-1$ kinetic coloumn in any n^{th} layer), the effect of -1 is insignificant at higher values of n , but it becomes significant and apparent in calculations with lower values of 'n' towards its gravitational centre.

So the magnitude of wasted (gravitational) kinetic energy of this one extra kinetic coloumn will *increase* gradually with reducing values of n , towards centre of body.

Hence, this gravitational deformation (gravitational field of this cosmic body) formed in space matrix as per coloumn geometry will produce a kinetic energy slope (push) towards centre of this body in which this *solitary cosmic body will gravitate* (collect matter) in this self deformed energy pit.

GRAVITATIONAL ATTRACTION (As per Treo model):

Two bodies fall towards each other, when the available gravitational kinetic energy generated from 'common shared space matrix in between', remains insufficient to support both body.

The total number of supporting gravitons (along with its associated graviton coloumns) which are produced by common shared space matrix in between, are grabbed in proportion to individual masses of both bodies, and thus smaller body (which remains looser) will fall more towards bigger body^[13n].

PROOFS OF THIS TREO MODEL OF QUANTUM GRAVITATION

(1) SPEED OF LIGHT

With each vibration, a photon packet moves (in translational motion) by a distance of one Planck's least length, from one bound treo to next bound treo in its translational motion. Thus in S vibrations, it will shift by S bound treo distance in one second.

This distance when converted in meters, is the known speed of light of 2.99792458 meter per second. ^[11c]

(2) **EXPLANATIONS OF $E=mc^2$:**

As value of ' c ' is 'S bound treos distance per second' and S^2 free treos (mass 'energy particles') are in one unit mass ('Planck Mass'). Thus the equation explains that one unit mass has S^2 or c^2 energy particles.

(3) **THE DISPERSION OF FORCE IN FORCE FIELDS.**

Proposed column geometry of deformed space matrix forms field of all forces, and thus gravitational field strength, intensity of light and charge density, all fade by 'reciprocal of the square of distance from its source'.

In Newton's gravitational field equation $MG = r^2a$, where ' a ' is the acceleration. But this ' a ' in tree model, is 'diluted mass pressure' at any point (in any layer at ' r ' distance), which is inversely proportional to r^2 and thus the equation only describe the 'load distribution pattern in kinetic column'.

(4) **MAGNETIC FIELD LINES.**

The rotating kinetons in *rotating layers of kinetic columns* of EM waves in first dimension, or with rotating orbitums in second dimension (which supports electron mass), or in rotating layers of a kinetic column of third and fourth dimensional deformation, *form magnetic force lines of the magnetic field* thus generated with motion of electrons (charge).^[13 0]

(5) **UNIT CHARGE.**

It is demonstrated that one unit charge of (1eV) is equal to charge on 1.440×10^{64} free treos, which are present in 'one unit electron'.^[13p]

(6) FORMATION OF ALL ELEMENTS.

The increasing number of protons, one at a time (with increasing Z number) at atomic nucleus, initiates an action and in a reaction, each preformed s (1), p (3), d (5), f (7) orbit, are filled by equal number of Electrons, at K (1 orbit), L (1+3 orbits), M (1+3+5 orbits), N (1+3+5+7 orbits) atomic energy level, along with increasing size of shells.

Total 8 kinetic columns (shells) of increasing size, are formed by deformation and counter deformation (in two opposite rotating vortexes) in a pyramid shaped area of unit space matrix. ^[13h]

Thus formed each 'orbit' present in each 'sub shell' of 'increasing size 'shell', are filled by one pair of electrons (up and down spin), and thus produces all 118 elements which are arranged in 7 groups of periodic table. ^[11d]

(7) GRAVITATIONAL FIELD QUANTUM LEVELS.

According to Schrodinger's equations of motion of a ,linear harmonic oscillator in second dimension, any moving load produces ripples at distance of 1,3,5,7,9,11,13,15 units, and the same pattern is seen in formation of 'gravitational field quantum levels', as per proposed column geometry.

(8) PATTERN OF SPREAD OF LOAD IN GRAVITATIONAL FIELD.

To support exerted load of cosmic body, is first supported by 4 dimensional deformation of space-time in gravitational sphere which forms around its gravitational centre and then by spherical 3 dimensional deformation (in which mass of body accommodates and thus all cosmic bodies are spherical).

Still distally the dispersing and diluted load is supported in 'two dimensional elliptical deformations' of gravitational field, the 'gravitational kinetic energy level' in its orbits at various

‘gravitational quantum levels’, decides the position and regulates the condensation of all baby bodies in their respective orbits.

Finally it dilutes in 1 dimensional deformation, which extends till last biggest concentric peripheral layer of bound treos, at last \sqrt{S} gravitational field quantum level, where one kinton supports one free treo load exerted by body (As in EM wave of unit photon). In one dimensional deformation the Newton’s gravitational field equations prevails which also obey proposed coloumn geometry.

(9) ROTATIONAL VELOCITY CURVE OF GALAXY.

The exhibited observed pattern of continued increasing orbital velocity of peripheral stars, in ‘rotational energy curve of our Galaxy’, can be explained by the fact that this space is rotating as one single rotating disc (where outer part of disc rotates fast) in ‘*three dimensional deformation of its galactic gravitational field*’. (Similar to rotating spherical body of Sun, formed in three dimensional deformation of solar gravitational field).^[13r]

The rotation of all stars in galaxy should not be compared with the planetary motion, where orbital velocity of distant planets reduces, because it is governed by Keplerian dynamics, as all planets are placed in *two dimensional deformation* of gravitational field of Sun.

(10) RINGS OF SATURN.

Large volume of low density mass (lighter then water) of Saturn, which could not be accommodated in its three dimensional spherical deformation, spilled out in two dimensional deformation of its gravitational field and formed spectacular rings, which are placed side by side with orbits of its near by satellites.^[13s]

(11) MECHANISM OF ORBITAL MOTION.

Every baby body revolves at its respective orbit by a ‘bound treos distance per second’, as ‘weight less point mass’ (after its

individual mass is already neutralized by its own gravitational field), effected only by gravitational kinetic energy levels of its gravitational field, at a revolution speed which is equal to frequency of its matter wave 'v', which is reciprocal to its distance from parent body ($v^2 = MG/r$) and not at all affected by individual masses of these baby bodies.^[13t]

(12) **PURPOSE OF GRAVITATION.**

All big or small weight bodies, dropped from leaning tower of Pisa by Galileo reached the ground simultaneously, since the legend gravitational field of Earth effected all of them equally, and it proved they all behaved as 'weight less point masses'; after their different individual masses were neutralized / supported by their own gravitational fields.

(13) **BABY BODIES IN ANY GRAVITATIONAL FIELD.**

(a) **POSITION OF BABY BODIES IN ANY GRAVITATIONAL FIELD.**

It has been observed in Treo model, that according to 'gravitational field kinetic energy level' or v^2 level (which can also be calculated by Newton's formula $v^2 = MG/r$) at various 'gravitational field quantum levels' all baby bodies condenses.

Thus in case of Sun, First baby body in two dimensional deformation of its gravitational field is always positioned at 10^{4th} quantum level and all big planets condense at 10 'planetary quantum levels' in between 10^{4th} to 10^{5th} 'gravitational field quantum levels'.

Suppose it is E in orbit of its first planet Mercury at 'first planetary quantum level', then it is found $E/2$ in orbit of Venus, $E/3$ in orbit of Earth. At 'second planetary quantum level' it is $E/4$ or $E/2^2$ is orbit of Mars, and at Third $E/9$ or $E/3^2$ is Cereus & asteroid belts, at Fourth $E/16$ or $E/4^2$ is Jupiter, at fifth $E/25$ or $E/5^2$ is Saturn, at seventh $E/49$ or $E/7^2$ is Uranus, at ninth $E/81$ or $E/9^2$ is

Neptune and exactly at tenth $E/100$ or $E/10^2$ is minor planet Pluto is placed.

At energy levels $E/6^2$ and $E/8^2$ are other Planetoids, while at $E/13^2$ is placed minor planet Eris.

(b) BIGGEST BABY BODY IN ANY GRAVITATIONAL FIELD ALWAYS CONDENSES AT THIRD PLANETARY QUANTUM LEVEL (with $E/9$ or $E/3^2$ kinetic energy level').

The biggest baby body in any gravitational field always condenses at Third 'gravitational field quantum level' which have "gravitational kinetic energy in its orbit of its first satellite divided by three square" ($E/3^2$).

It is calculated that the biggest satellite; Ganymede of Jupiter, Titan of Saturn, Titania of Uranus and Triton of Neptune are placed at third quantum level of their respective planet.

With the same logic the Cereus and asteroid belts located at 'third planetary quantum level' with a kinetic energy level of $E_{\text{Mercury}}/3^2$, should be the outcome of breaking down of biggest planet of our solar system, which is named by few astronomers as Madagascar. The uneven density (gravity) of Moon, water on Earth and incarnation of multi-cellular life on Earth all can be related to this catastrophe.

After doing calculations of gravitational kinetic energy levels of all planets of our solar system as above; it were also verified by study of 'gravitational kinetic energy level' in orbit of all satellites of four outer planets and also out side of our solar system at 'star TRAPIST 1 with its 7 Earth like baby bodies'. [18] [12]

(14) QUANTUM WORLD AND GENERAL THEORY ARE UNIFIED.

The joint matter wave in any planetary orbit (in two dimensional deformation of gravitational field) is formed, by union of M number of small matter waves at corresponding quantum levels (in quantum world of second dimension) of all M graviton columns which are placed side by side (and merge together) to form gravitational field of this M unit mass parent body. ^[13k]

{It is written in one famous shlok in yajur-veda (more then 3500 years old VEDA) “*yatha pinde tatha brahmande, yatha brahmande tatha pinde*” which means that what ever is in (quantum) micro world, the same principal works in (gravitational) macro world. }

(15) **CIRCUMFERENCE OF EARTH ORBIT.**

In any orbit placed at n^{th} bound tree layer from sun, n bound trees length is Reduced Compton wave length while its matter wave is formed on $2n$ bound trees. And circumference of this orbit; $\pi \times 2n$ bound trees is the Compton wave length of this wave (as per calculations). ^[13v]

In gravitational field of sun, the circumference of any orbit (at any gravitational quantum level), is formed by union of Compton wave lengths of all M number of matter waves at ‘identical quantum level’ in all M ‘graviton columns’, in two dimensional deformation of quantum world.

On calculation, this observation is found correct for circumference of orbit of Earth, and also found correct in calculation of circumference of orbits of all 7 planets of Star Trappist 1, located out side our solar system. ^[18]

(16) **SAME SIZE OF GRAVITATIONAL SPHERE OF SUN, IS CALCULATED BY GENERAL THEORY.**

If the mass of any cosmic body is represented in unit masses (Planck masses) and all distances are converted in bound tree layers (each of Planck least length), then it is observed that the ‘number of unit masses in any cosmic body’ are always equal to the ‘number of graviton layers present in radius of its gravitational

sphere' (single, four dimensional kinetic column) which forms around gravitational centre of any cosmic body or in one unit black hole. The Known radius of gravitational sphere (Schwarzschild sphere) of Sun calculated by general theory, when converted in terms of Planck least length exactly matches with above observation. ^[13k]

BOUND TREOS AND VOIDS

DARK MATTER AND DARK ENERGY:

It is proposed that elusive 'Dark matter particles' of universe are actually bound treos, and are responsible for 26.8% 'missing mass of universe'.^{[16][13w]} As kinetons they form 'kinetic columns' in all four dimensions which unite to form field of all forces. These kinetons form supporting 'dark halos' around Galaxies and as 'filaments' they bind galactic clusters, while as 'cosmic strings' they form architectural pattern of our self supporting oval universe.

All voids i.e. five negative dimensions of space matrix, which were fully curled up at the time of big bang, are slowly, continuously and simultaneously uncurling according to the proposed value of cosmological constant and thus the space matrix is stretched and the periphery of universe is racing out at the speed of light, by the force of this dark energy.

Total 68.3% of total energy, as dark energy of universe ^[16] is proposed to be energy incorporated with all 'five negative dimensional curled up voids'.

The space occupied by each 'void' (its size) is always increasing due to simultaneous uncurling of its curled up five negative dimensions in this ten dimensional space matrix, at each point by the rate of " $1/S^2$ " of present value of Planck least

length per vibration”; which is also the value of “cosmological constant” and force behind accelerating expansion of universe (according to proposed tree model).^[13 x]

The simultaneous uncurling of all the voids leads to balloon like expansion of our universe along with passage of time. Therefore, the present size of universe also indicates present age of universe. Hence the size of present universe measured in 13.799 light years; is also the age of universe i.e. 13.799 billion years.

The total expansion due to combined and simultaneous uncurling of all these voids at this postulated rate at each point in this contracted space, calculates the value of Hubble’s constant, which is 67.15 (+ - 1.2) Km per sec per Mega Parsec^[16].

For comparison, with the value of cosmological constant it is to be noted here, that the derived value of gravitational constant is ‘ S^2 kinetons per unit mass per second per second’^[13y]

If the (contracted present) radius of our universe has ‘ S^2 pairs of bound tree and void’ as postulated/calculated in this Tree model (also see below as the Hubble’s length), then the radius of this universe will increase by cosmological constant, i.e. by one Planck’s least length per vibration. In other words this means the balloon of universe is inflating continuously (at its periphery) at the speed of light.

FATE OF UNIVERSE

The (!) constant expansion of universe (!!) along with destruction of all defunct kinetic columns which are not supporting any load, due to continuous churning of matter in black holes (The sole purpose behind generation of Gravitational force: as it collect matter and then grinds it in black holes) and formation of “Hawkins energy pairs” of tree

and void, will lead to decrease in Total kinetic energy of Universe.

Decrease in its ‘total kinetic energy’ of universe and in turn its increasing ‘total potential energy’ (with increasing Entropy of universe); which results in slow aging of universe (and this is also responsible for aging of all its creatures) and all its entities. All matter (mass energy packets) and space matrix geometry, in this universe is only preserved as long as five negative dimensions of voids are partially curled up.

The continuous uncurling of curled up ‘five negative dimensions of voids’, at some moment in future, will match with five positive dimensions of treos and then all treos and their now full-size adjacent voids in space matrix will engulf each other instantly, after one life cycle of universe i.e. of S seconds. It will result in a big crunch or ‘death of universe’, as thus all space matrix of universe will suddenly collapse.

This sudden contraction of 10 dimensional unstable energy of space matrix’ of whole universe around (not in side) one universal singularity (defined as one point where time stops by stoppage of all vibrations of this one bound treo), will again divide it in two equal parts of five positive dimensions of treos and fully curled up five negative dimensions of voids. This dying universe from its ‘maximum potential energy state’ will now shift to ‘maximum kinetic energy state’ (as in pendulum), and thus a fully contracted new universe will be born, which will instantly start expanding to complete its next life span. ^[10e]
[11f][13z]

CONCLUSION

To find the answer of unsolved riddles of the universe, it is necessary to examine it in more than four dimensions of Space-

Time. In this proposed model the Matrix of universe is interwoven by omnipresent ten dimensional 'Space-Time-Energy' and energy is first time identified as fifth positive dimension of universe.

Gravity remained an unsolved puzzle. In proposed model, gravitation is described as four dimensional deformation of space matrix produced by mass pressure of cosmic body. In this deformed space the time moves differently at each quantum level and the potential energy of flat universe is converted into gravitational kinetic energy, to neutralize the load of body at its gravitational centre which get disperses on surrounding space matrix at each orbit in gravitational field.

All four basic forces are produced by 'load dependent increasing deformation (contraction) of space matrix with successive involvement of increasing number of all four dimensions of space-time' which changes the geometry of matrix (as described) and nature of force erupted, for there desired purposes and it brings all forces in one frame; hence unifies all forces.

By this model, we study *basic of all basics*, to examine 'the world around us', which will change our picture of universe forever. All predictions of this proposed super symmetrical, mathematically consistent, coloumn geometry of this 'Treo model of universe' will give us a totally new direction for future research and will open new path in every field of science.

Comments:

This fundamental research work is from book "Treo model of Structure and working of universe, cosmic code", published on 29th July, 2020. This work does not contradict any proven fact and its salient points are described here in 25 pages (in 7000 words). This fundamental research work, got matured gradually in last 25 years, and its step by step development is described in 2 previous books

of Dr Ashok Saxena, which were published in 2005 and in 2015 [10, 11].

Book; Ashok Saxena, 29/07/2020, “Treo model of Structure and working of universe, cosmic code”. Notion press. INDIA: Pages 284. ISBN: 978-1-64828-3. Please download with links,
<https://archive.org/details/treo-model-of-structure-and-working-of-universe-cosmic-code/page/n5/mode/2up> and via
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